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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Grover M. Myers, Law Department Patents
R J Reynolds Tobacco Company
P.O. box 1487
Winston-Salem, NC 27102-1487

EXAMINER

WALLS, DIONNE A

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 05/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/624,820

Applicant(s) *SP 14*

DUBE ET AL.

Examiner

Dionne A. Walls

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– The **MAILING DATE** of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Prosecution Re-Opened

The indicated allowability of claims 10-12, 14 and 25-26 is withdrawn in view of new grounds for rejections based on newly discovered references. Therefore the Amendment filed on April 17th, 2003 has not been entered. Rejections based on the newly cited references follow.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6-9,13 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar et al (US. Pat. No. 3,618,588) in view of Richards (US. Pat. No. 5,454,874) and the *Encyclopedia of Food Science Technology and Nutrition* ("EFSFTN").

Anwar et al discloses a process for manufacturing caramel color which comprises heating the juice from fruit, which contains levulose (corresponding to the claimed "fructose/reducing sugar"), in the presence of a catalyst, which may be employed in the amount of between about 4 and about 20 percent (corresponding to the claimed "less than about 30 weight percent/about .5 – 10 weight percent), and which can be chosen from an alkali catalyst, such as sodium hydroxide, under temperatures preferably ranging from about 222 – 350 degrees F (which is 105-176 degrees C) (see

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cols. 1-2). It would have been obvious to one having ordinary skill in the art at the time of the invention to have selected a temperature of at least 150 or 175 degrees C for the heating process since this temperature is in the range envisioned by Anwar et al to be a suitable temperature under which to carry out the caramelization process. The caramelization process is also carried out under a pressure of between about 10-60 psig (corresponding to the claimed "20 psig – 500 psig") for a time period of between about 2-12 hrs (corresponding to the claimed "period of at least about 10 minutes"). While Anwar et al may not specifically state that an *aqueous* mixture of the reducing sugar is subjected to heat treatment during the caramelization process, it does state that the juice of the fruit is added to catalyst and subjected to the caramelization process, and said juice is likely to contain some water. However, if this is not the case, Richards discloses, in its "Background of Invention" section, that reducing sugars may be heated either dry or *with water* (alone or in the presence of a base) during the caramelization process (see col. 1, lines 21-25). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide an aqueous mixture of reducing sugar/fructose and catalyst to subject to caramelization because this is conventional practice in the practice of caramelizing as taught in Richards. While Anwar et al modified by Richards may not teach that the caramel can be applied to a tobacco leaf or cut filler so that a smoking article can be prepared, Anwar et al does state that the caramel color of its invention can be used where caramel is normally used as a coloring agent (col. 6, lines 35-40). Further, the EFSFTN discloses that caramel can be added to tobacco for coloring purposes (see page 661, 2nd column). Therefore,

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it would have been obvious to one having ordinary skill in the art at the time of the invention to add the caramel disclosed in Anwar et al modified by Richards et al onto tobacco since it is well-known in the tobacco art to do so, as evidenced by the EFSFTN. While it is not explicitly stated that a smoking article is prepared from this tobacco with caramel additive, it would follow that such a product is ultimately prepared because tobacco is conventionally used as a filler for smoking articles.

Regarding claim 9, while the process of Anwar et al modified by Richards et al and the EFSFTN may not specifically disclose that the caramel composition is applied at an amount of from about 5% - 8% by weight based on the total dry weight of the tobacco, it would have been obvious to one having ordinary skill in the art at the time of the invention to arrive at this claimed range, after routine experimentation, in an effort to obtain an optimal and sufficient amount of caramel coloring for the tobacco material, while not adversely affecting the taste of the tobacco during smoking.

3. Claims 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar et al (US. Pat. No. 3,618,588) in view of the *Encyclopedia of Food Science Technology and Nutrition* ("EFSFTN").

Anwar et al discloses a process for manufacturing caramel color which comprises heating the juice of fruit, which contains levulose (corresponding to the claimed "fructose/reducing sugar"), in the presence of a catalyst, which may be employed in the amount of between about 4 and about 20 percent (corresponding to the claimed "less than about 30 weight percent/about .5 – 10 weight percent), and which can be chosen from an alkali catalyst, such as sodium hydroxide, under temperatures

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preferably ranging from about 222 – 350 degrees F (which is 105-176 degrees C) (see cols. 1-2). It would have been obvious to one having ordinary skill in the art at the time of the invention to have selected a temperature of at least 150 or 175 degrees C for the heating process since this temperature is in the range envisioned by Anwar et al to be a suitable temperature under which to carry out the caramelization process. The caramelization process is also carried out under a pressure of between about 10-60 psig (corresponding to the claimed “20 psig – 500 psig”) for a time period of between about 2-12 hrs (corresponding to the claimed “period of at least about 10 minutes”). While Anwar et al may not teach that the caramel can be applied to a tobacco leaf or cut filler so that a smoking article can be prepared, Anwar et al does state that the caramel color of its invention can also be used where caramel is normally used as a coloring agent (col. 6, lines 35-40). Further, the EFSFTN discloses that caramel can be added to tobacco for coloring purposes (see page 661, 2nd column). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to add the caramel disclosed in Anwar et al modified by Richards et al onto tobacco since it is well-known in the tobacco art to do so, as evidenced by the EFSFTN. While it is not explicitly stated that a smoking article is prepared from this tobacco with caramel additive, it would follow that such a product is ultimately prepared because tobacco is conventionally used as a filler for smoking articles.

4. Claims 10-12, 14, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finberg (US. Pat. No. 2,930,720) in view of *Encyclopedia of Food*

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Science Technology and Nutrition ("EFSFTN") and Zietlow et al (US. Pat. No. 6,180,158).

Finberg discloses a method for improving the flavor of a smoking article, said method including adding a casing (i.e. flavor) solution, which can include caramel (corresponding to the claimed "flavorful composition"), to a smokable filler material, which can include tobacco leaves. While Finberg may not disclose that the caramel is produced by providing a mixture consisting essentially of high fructose corn syrup and sodium hydroxide, and subjecting the mixture to heat, at a temperature of at least about 150/175 degrees C, the EFSFTN discloses that caramel can be produced when sugar, alone or in the presence of an additive, is heated. Among the types of sugars that can be used in the caramelization process include hydrolyzed starch syrups. Additives, such as bases (i.e. sodium hydroxide), are well-known for their use in accelerating the caramelization process, and influencing the flavor strength of the caramel. Further, the EFSFTN discloses that the temperature range of the heat treatment during caramelization can be between 120-250 degrees C (see page 655, 662 and 663). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to produce the caramel used in Finberg a process which involves the heating of hydrolyzed starch syrup in the presence of sodium hydroxide at a temperature within the above range since this manner of producing caramel is well-known in the art, as evidenced by its disclosure in the EFSFTN. While the EFSFTN may not specifically disclose high fructose corn syrup, the Zietlow et al reference does teach us that such corn syrup is considered to be a hydrolyzed starch syrup (see col. 3,

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lines 34-36). It follows then that one having ordinary skill in the art would have been motivated to use this type of starch syrup in the caramelization process as disclosed by the EFSFTN since high fructose corn syrup is a well-known hydrolyzed starch syrup which would obviously be a suitable caramelizing sugar.

Regarding claim 12, while there may be no explicit articulation that the caramel is applied at an amount of from about 5-8% weight based on the total dry weight of the tobacco material, it would have been obvious to one having ordinary skill in the art at the time of the invention to apply the caramel in the claimed amount, after routine experimentation, in order to determine the amount which would provide optimal flavoring to the finished smoking article.

Regarding claim 25-26, while the combined references may not explicitly state that the sodium hydroxide is present in an amount less than about 30 weight %, or 0.5 – about 10 weight %, of a water-free basis, as stated above, the EFSFTN does state that the hydroxide serves to influence the flavor of the caramel. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to arrive at the claimed amount of hydroxide in order to achieve an optimal flavor of caramel to be added to the smoking article.

5. Claims 10-12, 14, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evers et al (US. Pat. No. 3,942,537) in view of *Encyclopedia of Food Science Technology and Nutrition* ("EFSFTN") and Zietlow et al (US. Pat. No. 6,180,158).

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Evers et al teaches a method for improving the flavor of a smoking article, said method including adding oxocyclic pyrimidines and a conventional flavorant, which can include caramel (corresponding to the claimed "flavorful composition"), to a smokable filler material, which can include tobacco leaves. While Evers et al may not disclose that the caramel is produced by providing a mixture consisting essentially of high fructose corn syrup and sodium hydroxide, and subjecting the mixture to heat, at a temperature of at least about 150/175 degrees C, the EFSFTN discloses that caramel can be produced when sugar, alone or in the presence of an additive, is heated. Among the types of sugars that can be used in the caramelization process include hydrolyzed starch syrups. Additives, such as bases (i.e. sodium hydroxide), are well-known for their use in accelerating the caramelization process, and influencing the flavor strength of the caramel. Further, the EFSFTN discloses that the temperature range of the heat treatment during caramelization can be between 120-250 degrees C (see page 655, 662 and 663). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to produce the caramel used in Evers et al by a process which involves the heating of hydrolyzed starch syrup in the presence of sodium hydroxide at a temperature within the above range since this manner of producing caramel is well-known in the art, as evidenced by its disclosure in the EFSFTN. While the EFSFTN may not specifically disclose high fructose corn syrup, the Zietlow et al reference does teach us that such corn syrup is considered to be a hydrolyzed starch syrup (see col. 3, lines 34-36). It follows then that one having ordinary skill in the art would have been motivated to use this type of starch syrup in the

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carmelization process as disclosed by the EFSFTN since high fructose corn syrup is a well-known hydrolyzed starch syrup which would obviously be a suitable caramelizing sugar.

Regarding claim 12, while there may be no explicit articulation that the caramel is applied at an amount of from about 5-8% weight based on the total dry weight of the tobacco material, it would have been obvious to one having ordinary skill in the art at the time of the invention to apply the caramel in the claimed amount, after routine experimentation, in order to determine the amount which would provide optimal flavoring to the finished smoking article.

Regarding claim 25-26, while the combined references may not explicitly state that the sodium hydroxide is present in an amount less than about 30 weight %, or 0.5 – about 10 weight %, of a water-free basis, as stated above, the EFSFTN does state that the hydroxide serves to influence the flavor of the caramel. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to arrive at the claimed amount of hydroxide in order to achieve an optimal flavor of caramel to be added to the smoking article.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne A. Walls whose telephone number is (703) 305-0933. The examiner can normally be reached on Mon-Fri, 7AM - 4:30PM (Every other Friday off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

A handwritten signature in black ink, appearing to read "Dionne A. Walls", followed by a long horizontal line extending to the right.

Dionne A. Walls

May 6, 2003